

CEREAL RUST BULLETIN

Report No. 2

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From:

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AGRICULTURAL RESEARCH SERVICE
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(In cooperation with the Minnesota
Agricultural Experiment Station)

- Sixty percent wheat leaf rust and oat crown rust severities were observed in fields and plots in southern and central Texas by the first week in April.

The winter-sown small grain crop is generally in good condition throughout the United States. Wheat in southern and central Texas is two weeks behind normal. Rain the first week in April throughout Texas, made conditions ideal for plant growth. In Oklahoma and Kansas, wheat development is ahead of normal and the majority of the crop is in good shape. In the southeastern soft red winter wheat area, the crop is in good shape and ahead of normal maturity.

Wheat stem rust. No stem rust was found in commercial fields or nurseries in southern and central Texas by the first week in April.

Wheat leaf rust. During the first week in April, 60% wheat leaf rust severities were observed on lower leaves of susceptible cultivars in fields and nursery plots throughout southern and central Texas (Fig. 1). For example, in nursery plots, rust severities ranged from 60% on TAM 107 to 20% on Jagger to 0% on TAM 300. In late March, leaf rust was unusually heavy in Oklahoma where it survived the winter. In the southern tier of counties in Kansas, where leaf rust overwintered, rust pustules were found on the top two leaves in early April. Farther north in Kansas, rust was found on the lowest leaves. In conclusion, leaf rust is increasing in the southern U.S. If there is no freeze damage, leaf rust will be a problem in this area and also provide inoculum for the wheat-growing areas farther north.

During early April, leaf rust was severe in plots of susceptible southern soft red winter wheat cultivars in southern Louisiana, and many of the cultivars that previously were resistant are showing significant rust development this year. By early April, leaf rust was severe on susceptible cultivars in southern Georgia and Florida.

From rust collections made in mid-December in southwestern Arkansas, the following races were identified: MBBL, MBRL, and MFBL; and from rust collections made in early January in southern Georgia and Alabama, the MBRL, TFBL, TBBL, and TLGG races were identified. All of these races were identified from rust collections made during the 1996 race

survey. So far this year, the number one identified race is MBRL which was the number one race found in the 1996 race survey.

Wheat stripe rust. During the third week in March, wheat stripe rust was observed in California on a new variety, UC 1041, in the Yolo county plots and in the Davis campus nursery. In early April, foci of wheat stripe rust were found in fields of the Express cultivar in the Sacramento Valley.

Oat stem rust. During the first week in April, hot spots of oat stem rust 0.5 m in diameter were found in southern Texas fields and nursery plots. Along the roadside in central Texas, traces of stem rust were observed on wild oat (*Avena fatua*). The rains during the first week in April were good for rust infection and the rust should increase to significant amounts in the next few weeks. This oat stem rust development may provide inoculum for areas farther north, but the lack of oat acreage in the central Great Plains tends to interrupt potential epidemics.

This year, by late March, stem rust was increasing in oat varietal plots in southern Louisiana where it generally can be found every year by early March.

Oat crown rust. During the first week in April, crown rust was severe in southern and central Texas fields and plots. Sixty percent severities were common on the most susceptible cultivars in nursery plots and in some cultivars the rust was killing the host. In some fields in southern Texas, overwintering hot spots 3 m in diameter with 40-60% severities were observed.

In late March, severe crown rust was found in varietal plots in southern Louisiana.

Barley stem rust. As of April 2, no stem rust has been reported on barley in the U.S. this year. Limited amounts of barley are grown commercially in the southern states. Stem rust on barley rarely occurs in this area.

Barley leaf rust. During the first week in April, 10% leaf rust severities were observed on lower leaves in a few barley plots in southern and central Texas. In the other barley plots in the same nursery, lighter amounts were found.

Stripe rust on barley. In early March, barley stripe rust was found in winter barley plots at Corvallis, Oregon. By late March, stripe rust pustules were found at low levels in susceptible varieties within a 16 m diameter circle of the original infected plots. By the first week of April, barley stripe rust was severe in plots and strip tests on the Davis campus and Yolo county plots in California.

During the last week in March, no barley stripe rust was found in southern Texas plots.

Rye rusts. During the first week in April, 40% leaf rust severities were observed on the flag leaf in winter rye plots in central Texas. No rye stem rust has been reported this year.

Special Note: Cereal Rust Survey Listserver and Enclosed / Attached Graphic Files

Cereal Rust Survey Listserver

A cereal rust survey listserver (cereal-rust-survey@coafes.umn.edu) has been created for the rapid exchange of information relating to the current cereal rust situation in the U.S. By addressing a message to the single list address, you can send your information to all subscribers in the list. We would encourage anyone who might have information to share

or would like the latest information on the cereal rust situation in the U.S. to subscribe to the listserver.

GENERAL INSTRUCTIONS

All routine administrative requests (including subscriptions and unsubscriptions) concerning this mailing list are handled by an automated server. Please read this message carefully to find the information relevant to you.

SUBSCRIBING

To subscribe to the cereal-rust-survey list, send the following in the body (NOT THE SUBJECT LINE) of an email message to: cereal-rust-survey-request@coafes.umn.edu

subscribe

This will subscribe the email account from which you send the message to the cereal-rust-survey list.

UNSUBSCRIBING

To unsubscribe from list, send the following in the body (NOT THE SUBJECT LINE) of an email message to: cereal-rust-survey-request@coafes.umn.edu

unsubscribe

POSTING MESSAGES TO CEREAL-RUST-SURVEY LIST

To post a message to the cereal-rust-survey list, send the message to: cereal-rust-survey@coafes.umn.edu The message will be received by all subscribers to the cereal-rust-survey list.

HELP

To find out more about the automated server and the commands it understands, send the following in the body (NOT THE SUBJECT LINE) of an email message to cereal-rust-survey-request@coafes.umn.edu

help

If you feel you need to reach a human, send an email to:

cereal-rust-survey-approval@coafes.umn.edu

Attached/Enclosed Graphic Files

Most email subscribers to the Cereal Rust Bulletin receive the maps, if any, as enclosures or attachments to the email message containing the Cereal Rust Bulletin. If you find this creates any problems or bogs down your email, we would encourage you to pick up the maps from our home page (<http://www.umn.edu/rustlab/>). If you would like to change to this arrangement, please send an email to markh@puccini.crl.umn.edu requesting that you no longer receive the graphic file with your emailed Cereal Rust Bulletin.

Fig. 1. Leaf rust severities in wheat fields on April 8, 1997

